



# Space Launch System Highlights

February 2012



## SRR/SDR Kicks Off

On Feb. 15–16, the Space Launch System (SLS) Program held a kickoff meeting for the System Requirements Review (SRR) and System Definition Review (SDR) at the Jackson Center in Huntsville, Ala. Attendees included the Standing Review Board (SRB), chaired by former Space Shuttle flight director LeRoy Cain, independent review teams, and the SRR/SDR Pre-Board and Board, as well as representatives from NASA Headquarters and the Orion Multi-Purpose Crew Vehicle (MPCV) and Ground Systems Development and Operations (GSDO) Programs.

The SLS Program is following a two-step process for SRR/SDR. Step one is an extensive technical review that wraps up at the end of March, and step two is an in-depth business review that wraps up in June. This approach allows the ongoing Integrated Acquisition Team activity to be completed while the technical review is in progress and synchronizes the business review with the Agency's budget submittal process for fiscal year 2014. These reviews are part of NASA's systems engineering life cycle. If successful, the Program will complete Phase A (Concept Development) and enter Phase B (Preliminary Design).



A brief but dazzling burst of flame emerges from the A-1 test stand at Stennis Space Center during a successful 1.86-second J-2X Powerpack hot-fire test. *Photo credit: NASA/SSC*

## Powerpack Testing for J-2X Engine

At NASA's Stennis Space Center, J-2X powerpack testing is underway. During a 1.86-second test on Feb. 15, engineers checked control systems and introduced cryogenic fuels into the powerpack to ensure the integrity of the facility and test article.

The powerpack is a system of components on the top portion of the J-2X engine, including the gas generator, oxygen and fuel turbopumps, and related ducts and valves.



# SLS Brings Industry and Academia to Marshall

Over 115 representatives from 48 companies and universities attended an Advanced Development Industry and Academia Day on Feb. 14 at Marshall.

A draft NASA Research Announcement (NRA) was issued on Feb. 1 to solicit proposals for concept development, propulsion, structures, materials, software, manufacturing and avionics.

These efforts will focus on maintaining affordability and sustainability as the SLS rocket evolves from 70 to 130 metric tons of lift capacity. The final NRA is expected to be released in March.

NRA Chairperson Mindy Niedermeyer discusses SLS vehicle configurations with industry and university representatives interested in advanced development efforts for the new rocket. *Photo credit: NASA/MSFC*

## “Pass the Torch” Lecture for 2012

On Feb. 2, over 350 space enthusiasts – including 100 Space Campers – attended the 2012 “Pass the Torch” lecture at the U.S. Space and Rocket Center (USSRC) in Huntsville, Ala. to learn about the next heavy-lift rocket and human spacecraft that will explore deep space. Dr. Deborah Barnhart, USSRC chief executive officer, welcomed Dan Dumbacher, NASA’s deputy associate administrator for the Exploration Systems Development Division, who introduced SLS program manager Todd May and Orion deputy program manager Mark Kirasich.

The lecture was held in conjunction with the display of a full-scale Orion Pathfinder from Feb. 1–5 at the USSRC, where it was visited by over 7,600 people. The Orion Pathfinder was being moved from White Sands Missile Range, N.M. to Kennedy Space Center, Fla. for additional testing.



Space Campers enjoy a lively discussion with Dan Dumbacher, Mark Kirasich, Todd May and Dr. Deborah Barnhart. *Photo credit: NASA/MSFC*

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NASA’s Exploration Systems Development leaders and the tri-program managers visited a full-scale NASA Orion Pathfinder on exhibit at the USSRC in Huntsville during its move across the country to Kennedy Space Center. *Photo credit: NASA/MSFC*

